

APPENDIX M—CONSERVATION MEASURES, OIL AND GAS LEASE NOTICES, AND RECOVERY PLANS FOR THREATENED AND ENDANGERED SPECIES

SPECIFIC THREATENED/ENDANGERED SPECIES CONSERVATION MEASURES

The Utah Bureau of Land Management (BLM) is committed to the conservation of federally listed species. Pursuant to the Endangered Species Act (ESA), this means that the BLM will use methods and procedures necessary for improving the status of federally listed species and their habitats to a point at which the provisions of the ESA are no longer necessary. This effort includes ensuring that BLM actions requiring permit or approval are consistent with the objectives of approved recovery plans for listed species.

This list of conservation measures is part of the programmatic Section 7 consultation effort concerning existing land use plans (LUP) (Alternative A) in the decision area. To address the potential impacts of common land uses and to minimize the potential for their occurrence, the BLM, in coordination with the U.S. Fish and Wildlife Service (USFWS), has developed the following list of species-specific conservation measures for all future proposed actions involving BLM Utah.

Future implementation proposals that are determined to have potential for impacts to these listed species should incorporate these conservation measures where applicable and appropriate. Where these measures are incorporated into future proposals, there is a greater likelihood that the BLM will meet the standard of “may affect, but not likely to adversely affect” species listed under the ESA. Where the BLM determines that deviation, modification, or waiver of these conservation measures would be prudent or necessary, early coordination and Section 7 consultation with USFWS would be necessary. The BLM will reinstate Section 7 consultation at the project level as necessary to ensure proper management of listed species.

Bald Eagle (*Haliaeetus leucocephalus*)

The following list of measures provides species-specific guidance, intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Bald eagle. This list is not comprehensive. Additional conservation measures, or other modified versions of these measures, may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS.

1. The BLM will place restrictions on all authorized (i.e., permitted) activities that may adversely impact Bald eagles, their breeding habitat, roosting sites, and known winter concentration areas, in order to avoid or minimize potential impacts.
 - Measures have been adapted from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin & Muck 2002), as well as coordination between the BLM and USFWS. Measures include, but may not be limited to, seasonal/daily timing limitations and/or spatial buffers as follows:

- ♦ Temporary activities¹ or habitat alterations that may disturb nesting Bald eagles will be restricted from January 1 to August 31 within 1.0 mile of Bald eagle nest sites. Exceptions may be granted where no nesting behavior is initiated prior to June 1.
 - ♦ Temporary activities or habitat alterations that may disturb Bald eagles will be restricted within 0.5 mile of known winter concentration areas from November 1 to March 31. Additionally, where daily activities must occur within these spatial buffers and are approved through subsequent consultation, activities should be properly scheduled to occur after 9:00 a.m. and terminate at least one hour before official sunset to ensure that Bald eagles using these roosts are allowed the opportunity to vacate their roost in the morning and return undisturbed in the evening.
 - ♦ No permanent² infrastructure will be placed within 1.0 mile of Bald eagle nest sites or within 0.5 mile of Bald eagle winter concentration areas.
 - ♦ Where activities are authorized within breeding habitats or known winter concentration areas, monitoring efforts would document what, if any, impacts occur during project implementation, and to what extent the species was affected. The results of these monitoring efforts would be carried forward in the design and implementation of future projects as part of the adaptive management process.
2. For all project-related survey and monitoring actions:
 - Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts. Reports must follow field office guidance for BLM-specified formats for written and automated databases.
 - Any detection of Bald eagle presence during survey or monitoring efforts must be reported to the authorized officer within 48 hours of detection.
 3. Appropriately timed surveys in suitable Bald eagle nesting habitat or identified concentration areas shall be conducted in accordance with approved protocols prior to any activities that may disturb Bald eagles. Surveys would only be conducted by BLM-approved individuals or personnel.
 4. BLM shall, in coordination with cooperating agencies and/or partners (e.g., Utah Division of Wildlife Resources [UDWR], USFWS), verify annual status (active versus inactive) of all known Bald eagle nests and other identified concentration areas on BLM-administered lands.
 5. When project proposals that may affect threatened and endangered species are received, the BLM will coordinate with the USFWS at the earliest possible date so that the USFWS can provide necessary information to minimize, or avoid, the need to redesign projects at a later date to include conservation measures that may be determined as appropriate by the USFWS.
 6. BLM-administered lands within 1.0 mile of Bald eagle nests, or identified communal winter roosts, should not be exchanged or sold. If it is imperative that these lands be transferred out of BLM ownership, then every effort should be made to include conservation easements or voluntary conservation restrictions to protect the Bald eagles and support their conservation.
 7. Proponents of BLM-authorized actions will be advised that roadside carrion can attract foraging Bald eagles and potentially increase the risk of vehicle collisions with individual Bald eagles feeding on carrion. When carrion occurs on the road, appropriate officials will be notified for necessary removal.
 8. Power lines will be built to standards and guidelines identified by the *Avian Protection Plan* (APP) Guidelines.

¹ Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures, and resulting in no permanent habitat loss.

² Permanent activities continue for more than one breeding season and/or cause a loss of habitat or displace individuals through disturbances (e.g., creation of a permanent structure including, but not limited to, well pads, roads, pipelines, and electrical power lines).

9. The BLM will make educational information available to project proponents and the general public pertaining to the following topics:
 - Appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife;
 - Use of lead shot (particularly over water bodies);
 - Use of lead fishing weights; and
 - General ecological awareness of habitat disturbance.
10. Because Bald eagles are often dependent on aquatic species as prey items, the BLM will periodically review existing water quality records (e.g., Utah Department of Environmental Quality [UDEQ], UDWR, U.S. Geological Survey [USGS]) from monitoring stations on, or near, important Bald eagle habitats (i.e., nests, roost, concentration areas) on BLM lands for any conditions that could adversely affect Bald eagles or their prey. If water quality problems are identified, the BLM will contact the appropriate jurisdictional entity to cooperatively monitor the condition and/or take corrective action.

Mexican Spotted Owl (*Strix occidentalis lucida*)

The following list of measures provides species-specific guidance, intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Mexican spotted owl (MSO). This list is not comprehensive. Additional conservation measures, or other modified versions of these measures, may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS.

1. The BLM will place restrictions on all authorized (permitted) activities that may adversely affect the MSO in identified Protected Activity Centers (PAC), breeding habitat, or designated critical habitat, to reduce the potential for adverse impacts to the species.
 - Restrictions and procedures have been adapted from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin & Muck 2002), as well as coordination between the BLM and USFWS. Measures include:
 - ♦ Surveys, according to USFWS protocol, will be required prior to any disturbance related activities that have been identified to have the potential to impact MSO, unless current species occupancy and distribution information is complete and available. All surveys must be conducted by USFWS certified individuals, and approved by the BLM authorized officer.
 - ◇ Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the appropriate conservation measures below if project activities occur within 0.5 mile of suitable owl habitat, dependent in part on if the action is temporary³ or permanent⁴:
 - For all temporary actions that may impact owls or suitable habitat:
 - If action occurs entirely outside of the owl breeding season and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.

³ Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures and resulting in no permanent habitat loss.

⁴ Permanent activities continue for more than one breeding season and/or cause a loss of owl habitat or displaces owls through disturbances (e.g., creation of a permanent structure including, but not limited to, well pads, roads, pipelines, electrical power line).

- If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity should be delayed until outside of the breeding season.
 - Eliminate access routes created by a project through such means as raking out scars, revegetation, gating access points, etc.
- For all permanent actions that may impact owls or suitable habitat:
 - Survey two consecutive years for owls according to established protocol prior to commencing of activity.
 - a. If owls are found, no actions will occur within 0.5 mile of identified nest site. If nest site is unknown, no activity will occur within the designated PACs.
 - b. Avoid placing permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied.
 - c. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims (Delaney et al. 1997). Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5-mile buffer for suitable habitat, including canyon rims.
 - d. Limit disturbances to and within suitable owl habitat by staying on designated routes.
 - e. Limit new access routes created by the project.
- 2. The BLM will, as a condition of approval (COA) on any project proposed within identified PACs, designated critical habitat, or within spatial buffers for MSO nests (0.5 mile), ensure that project proponents are notified as to their responsibilities for rehabilitation of temporary access routes and other temporary surface disturbances, created by their project, according to individual BLM field office standards and procedures, or those determined in the project-specific Section 7 consultation.
- 3. The BLM will require monitoring of activities in designated critical habitat, identified PACs, or breeding habitats, wherein it has been determined that there is a potential for take. If any adverse impacts are observed to occur in a manner, or to an extent that was not considered in the project-specific Section 7 consultation, then consultation must be reinitiated.
 - Monitoring results should document what, if any, impacts to individuals or habitat occur during project construction/implementation. In addition, monitoring should document successes or failures of any impact minimization or mitigation measures. Monitoring results would be considered an opportunity for adaptive management, and as such, would be carried forward in the design and implementation of future projects.
- 4. For all survey and monitoring actions:
 - Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts.
 - Report any detection of MSO during survey or monitoring activities would be reported to the authorized officer within 48 hours.
- 5. The BLM will, in areas of designated critical habitat, ensure that any physical or biological factors (i.e., the primary constituent elements), as identified in determining and designating such habitat, remains intact during implementation of any BLM-authorized activity.
- 6. For all BLM actions that “may adversely affect” the primary constituent elements in any suitable MSO habitat, the BLM will implement measures as appropriate to minimize habitat loss or fragmentation, including rehabilitation of access routes created by the project through such means as raking out scars, revegetation, gating access points, etc.
- 7. Where technically and economically feasible, use directional drilling from single drilling pads to reduce surface disturbance, and minimize or eliminate need to drill in canyon habitats suitable for MSO nesting.

8. Prior to surface disturbing activities in MSO PACs, breeding habitats, or designated critical habitat, specific principles should be considered to control erosion. These principles include:
 - Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance.
 - Avoid surface disturbance in areas with high erosion hazards to the greatest extent possible. Avoid mid-slope locations, headwalls at the source of tributary drainages, inner valley gorges, and excessively wet slopes such as those near springs. In addition, should avoid areas where large cuts and fills would be required.
 - Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams.
9. Project developments should be designed and located to avoid direct or indirect loss or modification of MSO nesting and/or identified roosting habitats.
10. Water production associated with BLM-authorized actions should be managed to ensure maintenance or enhancement of riparian habitats.

Utah Prairie Dog (*Cynomys parvidens*)

The following list of measures provides species-specific guidance, intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Utah prairie dog. This list is not comprehensive. Additional conservation measures, or other modified versions of these measures, may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS.

1. Surveys according to approved protocols and procedures will be required prior to surface disturbance unless species occupancy and distribution information is complete, current, and available. Surveys would be conducted by BLM-approved biologists. In the event species occurrence is verified, the project proponent may be required to modify operational plans, at the discretion of the authorized officer, to include additional, appropriate protection measures or practices for the minimization of impacts to the Utah prairie dog and its habitat.
2. The BLM will restrict surface disturbing activities within 0.5 mile of active Utah prairie dog colonies when and where necessary, upon the recommendation of BLM Field Office (FO) staff biologists to BLM management and as necessary in coordination or consultation with USFWS.
3. No permanent surface disturbance or facility will be allowed within 0.5 mile of potentially suitable Utah prairie dog habitat, as identified and mapped by the BLM or UDWR, since 1976.
4. Unavoidable surface disturbing activities in Utah prairie dog habitat should be conducted between April 1 and September 30 (the period when prairie dogs are most likely to be found above ground). BLM projects will be designed to avoid direct disturbance to Utah prairie dog populations and habitat wherever possible. Designs should consider flow of water, slope, buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
5. Reclamation and restoration efforts in Utah prairie dog habitat will be conducted using native seed, unless otherwise specified in coordination with USFWS.
6. As funding allows, the BLM should complete a comprehensive assessment locating and mapping off-highway vehicle (OHV) use areas that interface with Utah prairie dog populations. Comparison of Geographic Information System (GIS) layers for Utah prairie dog populations and OHV use should give BLM personnel another tool to manage and/or minimize impacts from OHV use near known Utah prairie dog populations and habitat. Based on the information that is developed via GIS applications, appropriate actions should be taken to prevent OHV use in occupied territories.
7. The BLM will consider emergency OHV closure or additional restrictions to protect, conserve, and recover the species.

8. Where technically and economically feasible, the use of directional drilling or drilling of multiple wells from a single pad will be required to reduce surface disturbance in Utah prairie dog habitat.
9. For existing facilities, BLM and facility operators will consider if fencing infrastructure on well pads (e.g., drill pads, tank batteries, and compressors) would be needed to protect equipment from burrowing activities. In addition, BLM and project proponents should consider if future surface disturbing activities would be required at the site.
10. The BLM will provide educational information for project proponents and the general public pertaining to appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife, and to improve general ecological awareness of habitat disturbance.
11. Project-related vehicle maintenance activities will be conducted in maintenance facilities. Should it become necessary to perform vehicle or equipment maintenance on site, these activities will not be conducted on identified Utah prairie dog colonies or within a 350-foot distance from colonies. Precautions shall be taken to ensure that contamination of maintenance sites by fuels, motor oils, grease, etc. does not occur and such materials are contained and properly disposed of off site. Inadvertent spills of petroleum-based or other toxic materials shall be cleaned up and removed immediately.
12. The BLM will coordinate with interested private and governmental agencies and landowners to identify voluntary opportunities to modify current land stewardship practices that may have detrimental impacts on the Utah prairie dog and its habitat.
13. BLM-authorized equipment and vehicles planned for use within Utah prairie dog habitat will be cleaned to minimize the spread of noxious weeds or other undesirable vegetation types.

Southwestern Willow Flycatcher (*Empidonax trailii extimus*)

The following list of measures provides species-specific guidance, intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Southwestern willow flycatcher. This list is not comprehensive. Additional conservation measures, or other modified versions of these measures, may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS.

1. Surveys will be required prior to operations that “may adversely affect” Southwestern willow flycatcher unless species occupancy data and distribution information is complete and available. Surveys will only be conducted by BLM-approved personnel. In the event species occurrence is verified, project proponents may be required to modify operational plans at the discretion of the authorized officer. Modifications may include appropriate measures for minimization of adverse effects to Southwestern willow flycatcher and habitat.
2. The BLM will monitor and restrict, when and where necessary, authorized or casual use activities that “may adversely affect” Southwestern willow flycatcher, including but not limited to, recreation, mining, and oil and gas activities. Monitoring results should be considered in the design and implementation of future projects.
3. To monitor the impacts of BLM-authorized projects determined “likely to adversely affect” Southwestern willow flycatcher, the BLM should prepare a short report describing progress, including success of implementation of all associated mitigation. Reports shall be submitted annually to the USFWS Utah Field Office by March 1 beginning one full year from date of implementation of the proposed action. The report shall list and describe the following items:
 - Any unforeseen adverse effects resulting from activities of each site-specific project (may also require reinitiation of formal consultation);
 - When, and if, any level of anticipated incidental take is approached (as allowed by separate Incidental Take Statements of site-specific Formal Section 7 consultation efforts);

- When, or if, the level of anticipated take (as allowed by separate Incidental Take Statements from site-specific formal consultations) is exceeded; and
 - Results of annual, periodic monitoring which evaluate the effectiveness of the reasonable and prudent measures or terms and conditions of the site-specific consultation.
4. The BLM should avoid granting activity permits or authorizing development actions in Southwestern willow flycatcher habitat. Unoccupied potential habitat should be protected in order to preserve them for future management actions associated with the recovery of the Southwestern willow flycatcher.
 5. The BLM will ensure that the project design incorporates measures to avoid direct disturbance to populations and suitable habitats where possible. At a minimum, project designs should include consideration of water flows, slope, seasonal and spatial buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
 6. The BLM will continue to address illegal and unauthorized OHV use and activity upon BLM-administered lands. In order to protect, conserve, and recover the Southwestern willow flycatcher in areas of heavy unauthorized use, temporary closures, or use restrictions beyond those which are already in place, may be imposed. As funding allows, the BLM should complete a comprehensive assessment of all OHV use areas that interface with Southwestern willow flycatcher populations. Comparison of Southwestern willow flycatcher populations and OHV use areas using GIS would give BLM personnel another tool to manage and/or minimize impacts.
 7. All surface disturbing activities should be restricted within a 0.25 mile buffer from suitable riparian habitats, and permanent surface disturbances should be avoided within 0.5 mile of suitable Southwestern willow flycatcher habitat.
 - Unavoidable ground disturbing activities in occupied Southwestern willow flycatcher habitat should only be conducted when preceded by current year survey, should only occur between August 16 and April 30 (the period when Southwestern willow flycatchers are not likely to be breeding), and should be monitored to ensure that adverse impacts to Southwestern willow flycatcher are minimized or avoided, and to document the success of project specific mitigation/protection measures. As monitoring is relatively undefined, project specific requirements must be identified.
 8. The BLM will properly consider nesting periods for Southwestern willow flycatcher conducting horse-gathering operations in the vicinity of habitat.
 9. The BLM will ensure that plans for water extraction and disposal are designed to avoid changes in the hydrologic regime that would be likely to result in loss or undue degradation of riparian habitat.
 10. Native species will be preferred over non-native for revegetation of habitat in disturbed areas.
 11. The BLM will coordinate with other agencies and private landowners to identify voluntary opportunities to modify current land stewardship practices that may impact the Southwestern willow flycatcher and its habitats.
 12. Limit disturbances to within suitable habitat by staying on designated routes.
 13. Ground-disturbing activities will require monitoring throughout the duration of the project to ensure that adverse impacts to Southwestern willow flycatcher are avoided. Monitoring results should document what, if any, impacts to individuals or habitat occur during project construction/implementation. In addition, monitoring should document successes or failures of any impact minimization or mitigation measures. Monitoring results would be considered an opportunity for adaptive management and as such, would be carried forward in the design and implementation of future projects.
 14. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in Southwestern willow flycatcher habitat.

15. Habitat disturbances (i.e., organized recreational activities requiring special use permits, drilling activities) will be avoided within 0.25 mile of suitable Southwestern willow flycatcher habitat from May 1 to August 15.
16. Grazing allotments that contain habitat for the species will be managed with consideration for recommendations provided by the *Southwestern Willow Flycatcher Recovery Plan* and other applicable research.

OIL AND GAS LEASE NOTICES FOR SPECIAL STATUS SPECIES HABITAT

The BLM recognizes that nondiscretionary statutes such as the ESA may require conditions of approval that affect lease economics or even require disapproval of certain operations. IM 2002-174 directs all BLM State Offices to “include the [following] lease stipulation on oil and gas leases where threatened, endangered, or other special status species or critical habitat is known or strongly suspected.” Management actions in Chapter 2 include actions that would implement the following language:

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

IM 2002-174 also directs State Offices to “provide a separate notification to prospective lessees identifying the particular special status species that are present on the lease parcel offered. This information is to be provided through a lease notice and not by lease stipulation (unless otherwise provided in current LUPs). This stipulation would now be attached to most oil and gas leases issued by the Bureau, including areas identified in LUPs as open to standard lease terms and conditions.”

Utah IM-UT-2005-089 identifies interim policy for ESA Section 7 consultation procedures for the issuance of oil and gas lease parcels that will help ensure that Utah BLM is in compliance with ESA consultation requirements for this program. In December 2004, the BLM and USFWS personnel completed work on a set of lease notices for specific listed species that are to be attached to oil and gas leases offered in the State. On December 13, 2004, Section 7 consultation was initiated with the submission of a memorandum to the USFWS containing the lease notices. USFWS responded with a memorandum dated December 16, 2004, concurring with the BLM determination that use of the species-specific lease notices on appropriate lease parcels would “may affect, but not likely to adversely affect” listed species in the State. The following species-specific lease notice or notices should be attached, as appropriate, to any oil or gas lease that may contain a listed species or its habitat prior to the lease being offered for sale:

Lease Notice—Bald Eagle

The Lessee/Operator is given notice that the lands in this parcel contains nesting/winter roost habitat for the Bald eagle, a federally listed species. Avoidance or use restrictions may be placed on portions of the

lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs within or outside the Bald eagle breeding or roosting season. A *temporary* action is completed prior to the following breeding or roosting season leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of, and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s), and be conducted according to protocol.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
5. Temporary activities within 0.5 mile of winter roost areas (e.g., cottonwood galleries) will not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
6. No permanent infrastructure will be placed within 1.0 mile of nest sites.
7. No permanent infrastructure will be placed within 0.5 mile of winter roost areas.
8. Remove big game carrion to 100 feet from on lease roadways occurring within Bald eagle foraging range.
9. Avoid loss or disturbance to large cottonwood gallery riparian habitats.
10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be revegetated with native species.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale stage and lease development stage. These additional measures will be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.

Lease Notice—Mexican Spotted Owl

The Lessee/Operator is given notice that the lands in this lease contain suitable habitat for MSO, a federally listed species. **Insert the following if lease contains Designated Critical Habitat:** *[The Lessee/Operator is given notice that the lands in this lease contain Designated Critical Habitat for the Mexican spotted owl, a federally listed species. Critical habitat was designated for the Mexican spotted owl on August 31, 2004 (69 FR 53181-53298).]* Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting season. A *temporary* action is

completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s).
2. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.
 - a. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.
 - b. Document if action is temporary or permanent.
3. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
4. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting.
6. For all temporary actions that may impact owls or suitable habitat:
 - a. If the action occurs entirely outside of the owl breeding season (March 1–August 31) and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.
 - b. If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity must be delayed until outside of the breeding season.
 - c. Rehabilitate access routes created by the project through such means as raking out scars, revegetation, gating access points, etc.
7. For all permanent actions that may impact owls or suitable habitat:
 - a. Survey two consecutive years for owls according to accepted protocol prior to commencing activities.
 - b. If owls are found, no actions will occur within 0.5 mile of identified nest site. If nest site is unknown, no activity will occur within the designated PAC.
 - c. Avoid drilling and permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied.
 - d. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5-mile buffer for suitable habitat, including canyon rims.
 - e. Limit disturbances to and within suitable habitat by staying on approved routes.
 - f. Limit new access routes created by the project.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

Lease Notice—Utah Prairie Dog

The Lessee/Operator is given notice that lands in this lease may contain historic and/or occupied Utah prairie dog habitat, a threatened species under the ESA. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs when prairie dogs are active or hibernating. A *temporary* action is completed prior to the following active season, leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one activity/hibernation season and/or causes a loss of Utah prairie dog habitat or displaces prairie dogs through disturbances (i.e. creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s).
2. Lease activities will require monitoring throughout the duration of the project. To endure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in prairie dog habitat.
4. Surface occupancy or other surface disturbing activity will be avoided within 0.5 mile of active prairie dog colonies.
5. Permanent surface disturbance or facilities will be avoided within 0.5 mile of potentially suitable, unoccupied prairie dog habitat, identified and mapped by UDWR since 1976.
6. The Lessee/Operator should consider if fencing infrastructure on well pad (e.g., drill pads, tank batteries, and compressors) would be needed to protect equipment from burrowing activities. In addition, the operator should consider if future surface disturbing activities would be required at the site.
7. Within occupied habitat, set a 25-mph speed limit on operator-created and -maintained roads.
8. Limit disturbances to and within suitable habitat by staying on designated routes.
9. Limit new access routes created by the project.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

Lease Notice—Southwestern Willow Flycatcher

The Lessee/Operator is given notice that the lands in this parcel contains riparian habitat that falls within the range for Southwestern willow flycatcher, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the nesting season. A temporary action is completed prior to the following breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of habitat or displaces flycatchers through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the

lease are in compliance with the ESA. Integration of, and adherence to these measures, will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s), and be conducted according to protocol.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
5. Drilling activities will maintain a 300-foot buffer from suitable riparian habitat year long.
6. Drilling activities within 0.25 mile of occupied breeding habitat will not occur during the breeding season of May 1 to August 15.
7. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat.
8. Revegetate with native species all areas of surface disturbance within riparian areas and/or adjacent uplands.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

Lease Notice—Listed Plant Species

The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the ESA. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease

1. Site inventories:
 - a. Must be conducted to determine habitat suitability,
 - b. Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods,
 - c. Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and
 - d. All surveys must be conducted by qualified individuals.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Project activities must be designed to avoid direct disturbance to populations and to individual plants:
 - a. Designs will avoid concentrating water flows or sediments into plant occupied habitat.
 - b. Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated.

- c. Where populations occur within 200 feet of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction.
 - d. Areas for avoidance will be visually identifiable in the field (e.g., flagging, temporary fencing, rebar)
 - e. For surface pipelines, use a 10-foot buffer from any plant locations
 - i. If on a slope, use stabilizing construction techniques to ensure the pipelines don't move towards the population.
4. For riparian/wetland-associated species (e.g. Ute ladies-tresses), avoid loss or disturbance of riparian habitats:
 - a. Ensure that water extraction or disposal practices do not result in change of hydrologic regime.
5. Limit disturbances to and within suitable habitat by staying on designated routes.
6. Limit new access routes created by the project.
7. Place signing to limit all-terrain vehicle (ATV) travel in sensitive areas.
8. Implement dust abatement practices near occupied plant habitat.
9. All disturbed areas will be revegetated with native species composed of species indigenous to the area.
10. Post-construction monitoring for invasive species will be required.
11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
12. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

ENDANGERED SPECIES RECOVERY PLANS AND CONSERVATION AGREEMENTS

In addition to the conservation measures and lease notices noted above, documents such as species-specific recovery plans and conservation strategies/agreements/plans include management plans and strategies to protect special status species. These documents are developed using the most current science, but as monitoring and current scientific findings provide further information, they are subject to revision, amendment, or updates. As such, the list of documents applicable for the decision area could be increased or decreased based on species listing, condition, distribution, and so forth. Documents for species within the decision area include, but are not limited to, the following:

- Mexican Spotted Owl Recovery Plan, 1995
- Northern States Bald Eagle Recovery Plan, 1983
- American Peregrine Falcon Recovery Plan, 1984
- Utah Prairie Dog Recovery Plan, 1991
- Utah Prairie Dog Interim Conservation Strategy, 1997
- Welsh's Milkweed Recovery Plan, 1992
- Silver Cholla Cactus Recovery Plan, 1986
- Autumn Buttercup Recovery Plan, 1991
- Northern Goshawk Conservation Agreement, 1998
- Conservation Agreement and Strategy for the Coral Pink Sand Dunes Tiger Beetle, 1997

- Range-Wide Conservation Agreement for Roundtail Chub, Bluehead Sucker, and Flannelmouth Sucker, 2004
- Recovery Plan for the California Condor, 1996
- Final Recovery Plan for Southwestern Willow Flycatcher, 2002
- Interim Conservation Plan for Ambersnails of the Southwestern United States (DRAFT), Year Unknown.